

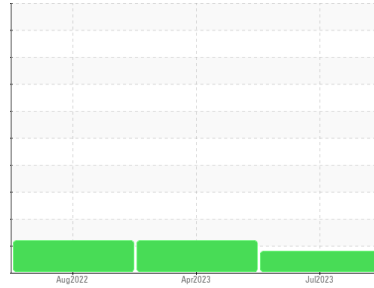


OIL ANALYSIS REPORT



Area
(24091) Rear Load
 Machine Id
REL133322
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (10 GAL)

Sample Rating Trend



FUEL



DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0090704	PCA0083189	PCA0078101
Sample Date	Client Info	03 Jul 2023	13 Apr 2023	29 Aug 2022
Machine Age	hrs	27063	26560	24524
Oil Age	hrs	26560	26052	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >120	7	15	7
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	3	2	0
Titanium	ppm	ASTM D5185m >2	1	2	4
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	4	2
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	<1	2	1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	4	5	4
Barium	ppm	ASTM D5185m 0	2	0	<1
Molybdenum	ppm	ASTM D5185m 60	59	52	53
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 1010	848	690	817
Calcium	ppm	ASTM D5185m 1070	1059	968	1009
Phosphorus	ppm	ASTM D5185m 1150	961	770	872
Zinc	ppm	ASTM D5185m 1270	1179	983	1129
Sulfur	ppm	ASTM D5185m 2060	3068	2512	2641

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	2	5	4
Sodium	ppm	ASTM D5185m	2	3	2
Potassium	ppm	ASTM D5185m >20	1	0	1
Fuel	%	ASTM D3524 >3.0	▲ 3.2	▲ 3.8	▲ 4.2

INFRA-RED

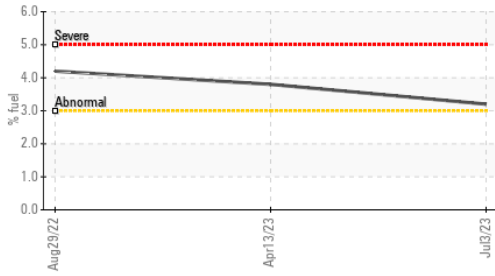
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >4	0.3	0.5	0.3
Nitration	Abs/cm	*ASTM D7624 >20	9.2	10.5	10.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.1	21.0	22.5

FLUID DEGRADATION

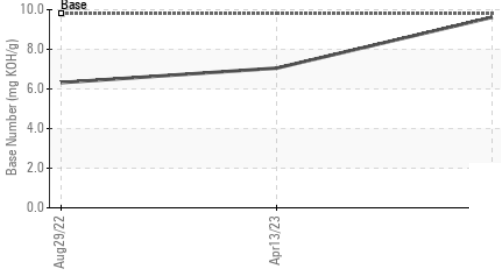
method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.3	17.6	18.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.62	7.05	6.32

OIL ANALYSIS REPORT

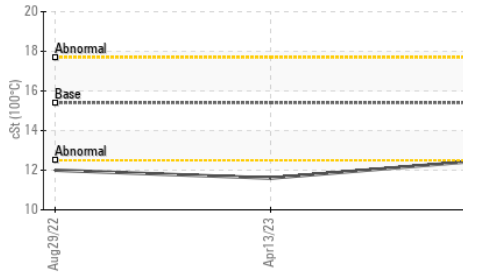
▲ Fuel Dilution



Base Number



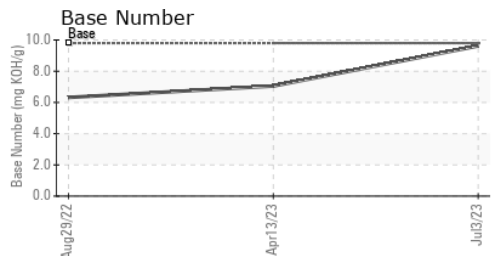
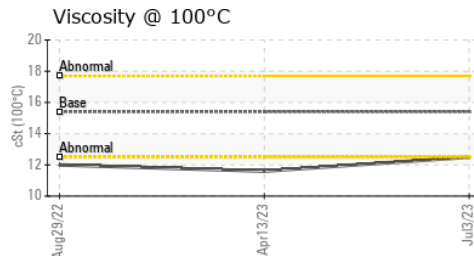
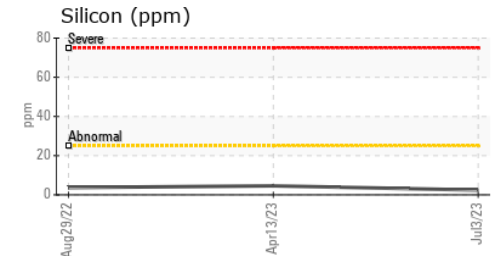
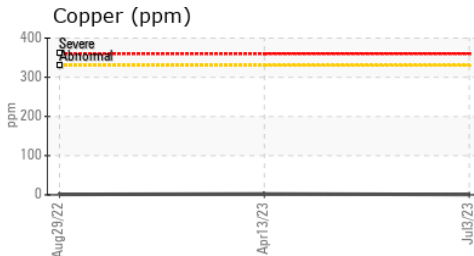
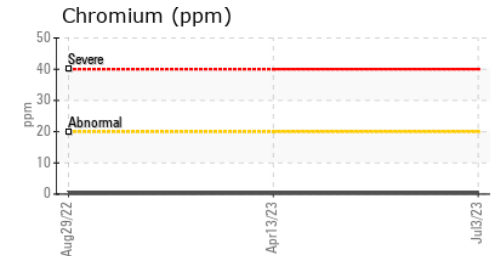
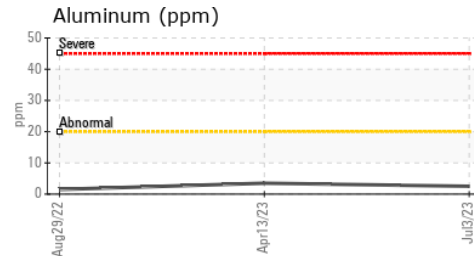
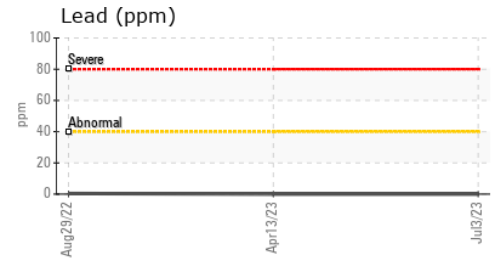
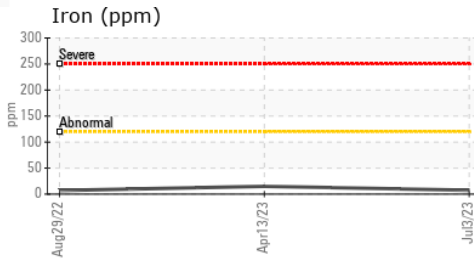
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.5	▲ 11.6 ▲ 12.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090704 **Received** : 14 Jul 2023
Lab Number : 05898769 **Diagnosed** : 17 Jul 2023
Unique Number : 10560125 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: PercentFuel)

UMM - Shop 401 - Norton
 186 South Washington Street
 Norton, MA
 US 02766
 Contact: Dave Wilson Jr.
 Dwilson1@win-waste.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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